TECHNICAL NOTES

LAKE STATES FOREST EXPERIMENT STATION
U.S. DEPARTMENT OF AGRICULTURE · · FOREST SERVICE

No. 481

Oak Wilt--Long-Distance Spread, 1955 and 1956

New oak wilt infection centers must arise from long-distance or overland spread for which insects are considered the primary vectors. Survey information collected in 1955 and 1956 indicates that new oak wilt infection centers are becoming established at a relatively constant rate in southeastern Minnesota and central Wisconsin. The data were obtained from 2 counties in Wisconsin and 3 in Minnesota (table 1). The results indicate the possibility of some difference between counties, with a lower rate of infection for Houston and Sherburne Counties in Minnesota. Additional results will be needed to determine whether the rather small difference is significant.

Table 1.--Establishment rate for new oak wilt infection centers

County	Miles of ½-chain-wide oak strips examined	Number of new infections		Number of new infections per 100 acres surveyed	
		1955	1956	1955	1956
Houston, Minn.	32.1	1	2	0.8	1.6
Sherburne, Minn.	91.7	6	4	1.6	1.1
Washington, Minn.	16.0	3	4	4.7	6.3
Adams, Wis.	110.6	6	9	1.4	2.0
Jackson, Wis.	64.7	5	4	1.9	1.5
Total or average	315.1	21	23	1.7	1.8

The survey method involves driving along roads that border oak type and noting all new infections on a ½-chain-wide strip along the edge of the timber. Attempting to survey a wider area would introduce the possibility of overlooking some new infections.

An analysis of the field data indicates that new infection centers are being established at the rate of about 1 for every 15 miles of oak, or 1 per 60 acres. The frequency seems to have no correlation with stand characteristics such as tree size or density.

It is planned to continue this survey to determine whether or not this infection rate is subject to fluctuations.

GERALD W. ANDERSON, Research Forester
RALPH L. ANDERSON, Plant Pathologist

January 1957